

Serial No. 10/736,921  
60246-220; 10691**REMARKS**

The Examiner states that the Oath or Declaration is defective for not including the zip code of the last inventor. A new declaration is enclosed including the zip code of the last inventor.

Claims 3 and 26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The Examiner states that the specification fails to describe the variable  $x$  in  $Mn_xO_2$ . The variable  $x$  is the number of atoms of manganese in the compound, and one skilled in the art would understand this. Because of the bonding of manganese and oxygen together, one skilled in the art would know what numbers the variable  $x$  can be. For example,  $x$  can be 1 to form  $MnO_2$ . The specification is enabling.

Claims 3, 26 and 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. With regard to claims 3 and 26, the Examiner states that the variable  $x$  is not defined in  $Mn_xO_2$ . One skilled in the art would know that the variable  $x$  is the number of manganese atoms. Claim 33 has been amended to create antecedent basis for "substrate."

Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reisfeld (US 2003/0021720) in view of Kobayashi (US 6,368,668). Reisfeld teaches a coating of titanium dioxide. The Examiner admits that Reisfeld does not disclose a layered catalytic coating including a first layer of a photocatalytic coating, a second layer of a photocatalytic metal loaded metal compound coating and a third layer of a thermocatalytic coating. The Examiner states that Kobayashi discloses these features, and it would be obvious to employ these features in Reisfeld. Applicant respectfully disagrees.

The claimed invention is not obvious. Kobayashi does not disclose a layered catalytic coating including a first layer of a photocatalytic coating, a second layer of a photocatalytic metal loaded metal compound coating and a third layer of a thermocatalytic coating. Kobayashi generally discloses that "a plurality of different photocatalyst coating compositions may be provided followed by successive coating of the plurality of different photocatalyst coating compositions on the surface of the substrate." Kobayashi only generally discloses a photocatalytic coating of titanium dioxide or titanium dioxide including a metal or metal/oxide. However, Kobayashi does not disclose any specific layers in any specific order, and there is no

Serial No. 10/736,921  
60246-220; 10691

suggestion in Kobayaski to employ any specific layers in any specific order. In the claimed invention, the claimed layers in the claimed order provide benefits that would not be obtained by generally and randomly applying layers on a substrate as disclosed in Kobayaski. Applicant has invented a unique layered coating that provides benefits over the prior art which allows the coating to be tailored for the specific application. That is, the choice and the selection of the particular layers in the claimed order is inventive. Just randomly and generally applying layers to a substrate would not produce the effect of the claimed invention. There is no suggestion or teaching in Kobayaski to form the coating with the layers and order as claimed.

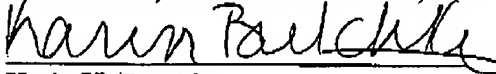
Kobayaski also does not disclose a thermocatalytic coating as claimed. Kobayaski discloses many different coatings, but does not disclose that any of these coatings function in a thermocatalytic manner. Kobayaski only discloses photocatalytic coatings.

There is also no suggestion in any of the references to use three substrates with different coatings as claimed in claims 24-27. Kobayaski generally discloses using coatings, but does not disclose, suggest or teach using different substrates each having a different coating. None of the references individually teach different substrates with different coatings, and therefore the combination of the references does not teach, suggest or disclose the claimed invention. The claimed invention is not obvious.

Thus, claims 1-35 are in condition for allowance. The Commissioner is authorized to charge Deposit Account No. 03-0835, in the name of Carrier Corporation, \$350.00 for seven claims in excess of twenty. No additional fees are seen to be required. If any additional fees are due, however, the Commissioner is authorized to charge Deposit Account No. 50-1482, in the name of Carlson, Gaskey & Olds, P.C., for any additional fees or credit the account for any overpayment. Therefore, favorable reconsideration and allowance of this application is respectfully requested.

Respectfully Submitted,

CARLSON, GASKEY & OLDS, P.C.



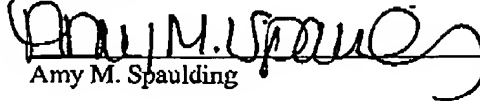
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Serial No. 10/736,921  
60246-220; 10691

CERTIFICATE OF FACSIMILE

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office, 571-273-8300 on November 28, 2005.

  
Amy M. Spaulding